CLAIMS

We claim:

1. A device for collecting semen received from a glans penis of a male human individual, said device comprising:

a chamber, said chamber comprising a distal end, a proximal end, and a conduit extending between said distal end and proximal end;

said proximal end having a rim defining an aperture;

said distal end having a surface that encloses said conduit;

at least a portion of said conduit proximal to said proximal end having a tapered shape radially inward defining a tapered section, whereby said tapered section accommodates the head of the glans penis; and

at least a portion of said conduit proximal to said distal end adapted for receiving the semen ejaculated from the glans penis, said receiving portion defining a reservoir section for the semen.

2. The device of claim 1, wherein said tapered accommodation section is configured to the general external image of the head of the glans penis.

3. The device of claim 1, wherein said tapered accommodation section is configured to prevent loss of any fractions of semen during ejaculation.

4. The device of claim 1, wherein said reservoir section is configured to prevent loss of any fractions of semen during ejaculation.

5. The device of claim 1, wherein said tapered accommodation section and said reservoir section are configured to prevent loss of any fractions of semen during ejaculation.

6. The device of claim 1, wherein said enclosure surface is adapted to allow said chamber to stand upward on a surface.

7. The device of claim 1, wherein said enclosure surface is at least substantially flat.

8. The device of claim 1, wherein the longest cross-section of said reservoir section is equal to or less than the shortest cross-section of the tapered accommodation section.

9. The device of claim 8, wherein said enclosure surface is adapted to allow said chamber to stand upward on a surface.

10. The device of claim 9, wherein said enclosure surface is at least substantially flat.

11. The device of claim 1, wherein the longest cross-section of said reservoir section is greater than the shortest cross-section of the tapered accommodation section.

12. The device of claim 11, wherein said enclosure surface is adapted to allow said chamber to stand upward on a surface.

13. The device of claim 12, wherein said enclosure surface is at least substantially flat.

14. The device of claim 1, further comprising:

at least one protruding member disposed on said chamber, said protruding member adapted to allow said chamber to stand upward on a surface.

15. The device of claim 14, wherein said protruding member comprises at least one leg.

16. The device of claim 14, wherein said protruding member comprises a collar surrounding at least a portion of said chamber.

17. The device of claim 14, wherein the longest cross-section of said reservoir section is equal to or less than the shortest cross-section of the tapered accommodation section.

18. The device of claim 14, wherein the longest cross-section of said reservoir section is greater than the shortest cross-section of the tapered accommodation section.

19. The device of claim 1, wherein said tapered accommodation section is bell-shaped.

20. The device of claim 1, wherein said tapered accommodation section is olive-shaped.

21. The device of claim 1, wherein said tapered accommodation section is hemispherical-shaped.

22. The device of claim 1, wherein said tapered accommodation section is ellipsoid-shaped.

23. The device of claim 1, wherein said tapered accommodation section is multifaceted-shaped.

24. The device of claim 1, wherein said tapered accommodation section is cone-shaped.

25. The device of claim 1, wherein said tapered accommodation section comprises at least one wall, wherein said at least one wall comprises a shape selected from the group consisting of curved, multicurved, sloped, multifaceted, beveled, sloped, and chamfered.

26. The device of claim 1, further comprising a cover disposed on said

chamber.

27. The device of claim 1, further comprising a cover disposed on said device.

28. The device of claim 1, further comprising a tracking medium disposed on said chamber.

29. The device of claim 28, wherein said a tracking medium comprises at least one of frosted surface or bar code label.

30. The device of claim 1, further comprising a volume identification medium disposed on said chamber.

31. The device of claim 30, wherein said a volume identification medium comprises at least one graduated mark or a calibrated region adapted for indicating volume.

32. The device of claim 1, wherein said device is used for an application selected from the group consisting of hospitals, clinics, semen analysis laboratories, fertility and infertility diagnostic laboratories, IVF clinics, ICSI clinics, artificial insemination clinics, vasectomy clinics, andrology research laboratories, basic research laboratories, forensic (crime) laboratories and law enforcement agencies, prisons, home sperm test users, and environmental monitoring for effect of toxins on spermatogenesis in occupations such as mining, agriculture, radiation exposure, and industries.

33. The device of claim 1, further comprising a port disposed on said reservoir section to allow for drainage or removal of the semen.

34. The device of claim 1, further comprising a port disposed on said reservoir section to allow for access or communication to the semen.

35. The device of claim 1, wherein said chamber is integrally formed.

36. The device of claim 1, wherein said device is integrally formed.

37. The device of claim 1, wherein said chamber is partially integrally formed.

38. The device of claim 1, wherein said device is partially integrally formed.

39. The device of any one of claims 37 and 38, wherein said tapered accommodation section and said reservoir section are attachable to one another and/or detachable from one another.

40. The device of claim 1, further comprising an adapter section.

41. The device of claim 40, further comprising at least one handle disposed on said device.

42. The device of claim 41, wherein said handle comprise at least one of tab, ridge, strap, knob, protrusion, or lever.

43. The device of claim 40, further comprising at least one grip ridge disposed on said device.

44. The device of claim 40, wherein said adapter section comprises a collar.

45. The device of claim 44, wherein said adapter section is configured to accommodate the glans penis.

46. The device of claim 44, wherein said collar comprises at least one of lubricant, jacket or lining.

47. The device of claim 40, wherein said adapter section comprises an ejaculation aid device.

48. The device of claim 40, wherein said adapter section comprises a stimulation device for stimulating the glans.

49. The device of claim 40, wherein said adapter section is adapted for being held by the individual or a partner.

50. The device of claim 1, wherein said reservoir section at least partially comprises at least one communication channel.

51. The device of claim 50, wherein said at least one communication channel comprises at least one of channel, microchannel, capillary tube, microtubing, tubing, pipette, micropipette, or column.

52. The device of claim 1, further comprising a port disposed on said collection device.

53. The device of claim 52, wherein said port is in communication with at least one communication channel.

54. The device of claim 53, wherein said at least one communication channel comprises at least one of channel, microchannel, capillary tube, microtubing, tubing, pipette, micropipette or column.

55. The device of claim 1, further comprising at least one handle disposed on said device.

56. The device of claim 55, wherein said handle comprise at least one of tab, ridge, strap, knob, protrusion, or lever.

57. The device of claim 1, further comprising at least one grip ridge disposed on said device.

58. A method for collecting semen received from a glans penis of a male human individual during ejaculation, said method comprising:

placing a semen collecting device in contact with the glans head of the individual; and

receiving semen produced from the ejaculation in said semen collecting device.

59. The method of claim 58, wherein said collection device comprises:

a chamber, said chamber comprising a distal end, a proximal end, and a conduit extending between said distal end and proximal end;

said proximal end having a rim defining an aperture;

said distal end having a surface that encloses said conduit;

at least a portion of said conduit proximal to said proximal end having a tapered shape radially inward defining a tapered section, whereby said tapered section accommodates the head of the glans penis; and

at least a portion of said conduit proximal to said distal end adapted for receiving the semen ejaculated from the glans penis, said receiving portion defining a reservoir section for the semen.

60. The method of claim 59, wherein the said contact of the glans head with said collection device is at least partially in contact with said tapered accommodation section.

61. The method of claim 59, wherein the said contact of the glans head with said collection device is solely in contact with said tapered accommodation

section.

62. The method of claim 59, wherein said tapered accommodation section is bell-shaped.

63. The method of claim 59, wherein said tapered accommodation section is olive-shaped.

64. The method of claim 59, wherein said tapered accommodation section is hemispherical-shaped.

65. The method of claim 59, wherein said tapered accommodation section is ellipsoid-shaped.

66. The method of claim 59, wherein said tapered accommodation section is multifaceted-shaped.

67. The method of claim 59, wherein said tapered accommodation section is cone-shaped.

68. The method of claim 59, wherein the placement prevents loss of any fractions of semen during ejaculation.

69. The method of claim 59, wherein said tapered accommodation section is configured to the general external image of the head of the glans penis.

70. The method of claim 59, wherein the placement includes aligning the urethra of the glans penis with said reservoir section.

71. The method of claim 59, wherein the placement includes aligning the urethra of the glans penis with said tapered accommodation section.

72. The method of claim 59, wherein the placement includes aligning the urethra of the glans penis with both said reservoir section and said tapered accommodation section.

73. The method of claim 58, wherein the placement prevents loss of any fractions of semen during ejaculation.

74. A test kit for analyzing the semen collected in claim 58, comprising:

a surface on which the semen sample collected in said device can be deposited; and

a means for analyzing the semen sample deposited on said surface.

75. The test kit of claim 74, wherein said means for analyzing the semen sample determines at least one of: presence of sperm; concentration of sperm; condition of sperm, quality of sperm, sperm count, sperm morphology, sperm motility, or sperm viability and markers of accessory sex gland secretion.

76. A test kit for analyzing the semen collected in claim 58, comprising:

a surface on which the semen sample collected in said device can be deposited;

an antibody specific for a testes and sperm tissue-specific protein antigen present throughout spermiogenesis; and

a means for indicating binding of said monoclonal antibody to antigen present the semen sample deposited on said surface.

77. A test kit for analyzing the semen collected in claim 58, comprising:

a communication channel on which the semen sample collected in said device can be received; and

a means for analyzing the semen sample received from said communication channel.

78. A test kit for analyzing the semen collected in claim 1, comprising:

a surface on which the semen sample collected in said device can be deposited; and

a means for analyzing the semen sample deposited on said surface.

79. The test kit of claim 78, wherein said means for analyzing the semen sample determines at least one of: presence of sperm; concentration of sperm; condition of sperm or quality of sperm.

80. A test kit for analyzing the semen collected in claim 1, comprising:

a surface on which the semen sample collected in said device can be deposited;

an antibody specific for a testes and sperm tissue-specific protein antigen present throughout spermiogenesis; and

a means for indicating binding of said monoclonal antibody to antigen present the semen sample deposited on said surface.

81. A test kit for analyzing the semen collected in claim 1, wherein said reservoir section at least partially comprises at least one communication channel, wherein semen sample collected in said device can be received; and

a means for analyzing the semen sample received from said communication channel.

82. The device of claim 1, further comprising a port disposed on said collection device.

83. A test kit for analyzing the semen collected in claim 82, further comprising:

at least one communication channel in communication with said port, wherein semen sample collected in said device can be received via said port; and

a means for analyzing the semen sample received from said communication channel.

84. A method for analyzing the semen collected in claim 58, comprising:
providing a surface;
depositing the semen sample collected in said device on said surface; and
analyzing the semen sample deposited on said surface.

85. The method of claim 84, wherein said analyzing of the semen sample comprises at least one of determining the presence of sperm; determining the concentration of sperm; determining the condition of sperm or determining the quality of sperm.

86. The method for analyzing the semen collected in claim 58, comprising:
providing a surface;
depositing the semen sample collected in said device on said surface;
providing an antibody specific for a testes and sperm tissue-specific protein antigen present throughout spermiogenesis; and
indicating binding of said monoclonal antibody to antigen present the semen sample deposited on said surface.

87. A method for analyzing the semen collected in claim 1, comprising:
providing a surface;
depositing the semen sample collected in said device on said surface; and
analyzing the semen sample deposited on said surface.

88. The method of claim 87, wherein said analyzing of the semen sample comprises at least one of determining the presence of sperm; determining the concentration of sperm; determining the condition of sperm or determining the quality of sperm.

89. The method of claim 1, comprising:
providing a surface;
depositing the semen sample collected in said device on said surface;

providing an antibody specific for a testes and sperm tissue-specific protein antigen present throughout spermiogenesis; and

indicating binding of said monoclonal antibody to antigen present the semen sample deposited on said surface.